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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/773,889      | 02/02/2001  | Abdulrauf Hafeez     | P12509-US1 SC       | 8806             |

26615 7590 07/12/2004

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| EXAMINER |
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BURD, KEVIN MICHAEL

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| ART UNIT | PAPER NUMBER |
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2631

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/773,889

Applicant(s)

HAFAEEZ ET AL.

Examiner

Kevin M Burd

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 09 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,8,11-18,20-23 and 25-29 is/are rejected.
- 7) ☒ Claim(s) 4-7,9,10,19,24 and 30-32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

1. This office action, in response to the remarks filed after final on 6/9/2004, is a non-final office action.
2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

***Response to Arguments***

3. Applicant's arguments, see response after final, filed 6/9/2004, with respect to the rejections of claims 1-3, 8-18, 20-23 and 25-32 under 35 USC 102(b) and 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Amada et al (US 2001/0053972 A1).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 8, 11-17, 20-23 and 27-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Amada et al (US 2001,0053972 A1).

Regarding claims 1 and 11, 16, Amada discloses a system comprising a pulse shaping filter (figure 6, item 162 and paragraph 0077) that filters an input signal. The input signal corresponds to a received plurality of training symbols and outputs the filtered signal (paragraph 0072). The "training" symbols the known symbols sent from the codebook 144 (paragraphs 0049 and 0052). A sampler is coupled to the output of the filter and outputs a sampled version of the signal (paragraph 0077). Samples are extracted from the sampled signal and an impulse response of the pulse shaping filter is calculated from the input "training" symbols and the extracted samples (paragraph 0077).

Regarding claim 2, the pulse shaping filter 162 receives a signal.

Regarding claims 3 and 13, the "training" symbols are stored in the cookbook.

Regarding claim 8, the system is found in a portable telephone (paragraph 0002).

Regarding claims 14, 15, 17, the signals received from a portable telephone are demodulated to recover the original signal prior to transmission.

Regarding claim 12, TDMA transmissions are a typical transmission used in portable telephones.

Regarding claims 20 and 28, Amada discloses a system comprising a pulse shaping filter (figure 6, item 162 and paragraph 0077) that filters an input signal. The input signal corresponds to a received plurality of training symbols and outputs the

filtered signal (paragraph 0072). The "training" symbols the known symbols sent from the codebook 144 (paragraphs 0049 and 0052). A sampler is coupled to the output of the filter and outputs a sampled version of the signal (paragraph 0077). Samples are extracted from the sampled signal and an impulse response of the pulse shaping filter is calculated from the input "training" symbols and the extracted samples (paragraph 0077). The signals received from a portable telephone are demodulated to recover the original signal prior to transmission.

Regarding claim 21, the pulse shaping filer 162 receives a signal.

Regarding claim 22, the "training" symbols are stored in the cookbook.

Regarding claim 23, TDMA transmissions are a typical transmission used in portable telephones.

Regarding claim 27, the system is found in a portable telephone (paragraph 0002).

Regarding claim 29, the pulse shaping filer 162 receives a signal.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amada et al (US 2001,0053972 A1) in view of Schollhorn (US 6,438,567).

Regarding claim 18, Amada discloses the method stated above in paragraph 4. Amada does not disclose an interpolator for increasing the effective sampling rate. Schollhorn discloses using an interpolator to increase an effective sampling rate for an impulse response of a filter (column 2, lines 32-47). It would have been obvious for one of ordinary skill in the art at the time of the invention to use the interpolator of Schollhorn in the method of Amada. By increasing the effective sampling rate, the precision is increased since more samples are taken.

6. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amada et al (US 2001,0053972 A1)

Regarding claim 25, Amada discloses the system stated above in paragraph 4. Amada does not disclose a synchronizer for synchronizing the sampler and the pulse-shaping filter. However, it would have been obvious for one of ordinary skill in the art at the time of the invention to synchronize all the components of the receiver to one another. The circuit speed would be increased since each downstream device would be prepared to process the output of the upstream elements at the appropriate time.

Regarding claim 26, Amada further discloses receiving the signal, and sampling the signal (paragraph 0077).

***Allowable Subject Matter***

7. Claims 4-7, 9, 10, 19, 24 and 30-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Contact Information***

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872-9314, (for formal communications intended for entry or for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Burd, whose telephone number is (703) 308-7034. The Examiner can normally be reached on Monday-Thursday from 9:00 AM - 6:00 PM.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.



Kevin M. Burd  
PATENT EXAMINER  
7/7/2004